REMARKS

The Examiner is thanked for indicating that the Information Disclosure Statement dated April 20, 2001 was considered.

Claims 1-30 are currently pending in this application, with Claims 1, 7, 11, 13, 17, 21, 26 and 29 being independent.

The Official Action rejects Claim 12 under 35 U.S.C. § 112; Claims 1, 5, 7, 9, 21-23 and 25-30 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,184,996, hereinafter *Gase*; Claims 13-16 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,940,582, hereinafter *Akabori*; Claims 6, 10 and 17-20 under 35 U.S.C. §103(a) as being unpatentable over *Gase* in view of *Akabori*; Claims 2, 8 and 12 under 35 U.S.C. § 103(a) as being unpatentable over *Gase* in view of U.S. Patent No. 5,696,702, hereinafter *Skinner*; Claim 24 under 35 U.S.C. § 103(a) as being unpatentable over *Akabori* in view *Skinner*; Claims 3 and 4 under 35 U.S.C. § 103(a) as being unpatentable over *Gase* in view of *Skinner* and further in view of *Akabori*; and Claim 11 under 35 U.S.C. § 103(a) as being unpatentable over *Gase* in view of *Skinner* and further in view of U.S. Patent No. 6,606,163, hereinafter *Suzuki*.

Amendments to the claims

Claims 21, 26 and 29 are amended to more clearly define that the print processing information relates to a current operation state of a terminal.

Rejections under 35 U.S.C. § 112

On the middle of page two of the Official Action an issue is raised regarding the subject matter of Claim 12 directed to a detector that detects whether an operator is in a vicinity of each terminal allegedly not being adequately described in the specification. It is respectfully pointed out that this subject matter is referred to on the bottom of page 98 through the top of page 99 of the present specification. There it is stated that "detection processing may be performed to determine whether the operator is actually in front of the terminal or not. A photosensor formed from a light source such as a light-emitting diode or a semiconductor laser, and a detection device such as a photodiode may be used as a human detecting device, and one of these human detecting devices allocated to each terminal to detect whether an operator is present or not." It is submitted that the subject matter defined by Claim 12 is fully supported and enabled in the specification, and it is requested that this rejection be withdrawn. Should the concerns regarding the subject matter of Claim 12 remain, it is requested that the Examiner telephone the undersigned in order to expedite the prosecution of this application.

Rejections under 35 U.S.C. § 102

The Official Action rejects Claims 1, 5, 7, 9, 21-23 and 25-30 as being anticipated by *Gase*.

Gase discloses a network printer with remote print queue control procedure. A number of client processors 10, 12 are connected to a printer 14 via the internet WWW. Both the client processors 10, 12 and the printer 14 include a browser procedure 18 and a server procedure 20. Each client processor 10, 12 includes an

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application 22 which may have a print job ready for submission to printer 14. A print job is delivered to the printer by sending a URL from the client processor 10, 12 to the printer 14. Once the printer 14 receives the URL, the printer 14 uses the browser procedure 26 to respond to the received URL by accessing, via the WWW, the print job present in the application 22 that is designated by the URL. When the print job is accessed, the client processor then responds with the text of the print job, which is delivered to and printed by the printer 14.

The printer 14 further includes a job queue 28 which lists the URLs of received print jobs. Before printing the print job, the corresponding URLs are stored in the job queue 28. The job queue 28 is managed by a queue manager 32 which maintains status data, and controls the position of each of the URLs listed on the job queue 28. A job detail page enables the originating client processor to exert control over job queue 28 and the details of the specific job URL. By clicking one of the entries on the job detail page, alterations can be made to: the identity of the job indicated, the state of the job, the number of pages to be printed, the URL of the job, the job description, the owner of the job, and the number of copies to be printed. The queue position of a client processor's URL listed may be changed by operating a change button 60. However, in order to modify the queue position of a client processor's URL, the client processor must have been previously provided with a higher assigned priority level which enables its print jobs to enjoy a higher priority status than other print jobs on job queue 28.

An aspect of the presently claimed invention is generally directed to printing and has combinations of features including transmission and reception of operation

information relating to a current operation state of a terminal. Claims 1, 7, 21, 26 and 29 presently define combinations directed to this feature.

Gase does not disclose a combination of features including detection or transmission of pieces of operation information relating to a current operation state of a terminal. The Official Action proposes that the server procedure 24 discloses this feature. However, the server procedure 24 in *Gase* only detects the URL of the particular print job, the URL not including operation information of a terminal as defined by the claims. For at least this reason, Claims 1, 7, 21, 26 and 29 are allowable.

Another aspect of the presently claimed invention is directed to combinations of features including determination of priority levels for a plurality of print jobs waiting to be printed based on a piece of operation information detected from a terminal that transmitted the print job, and instruction of the printer to process the plurality of print jobs in order based on the determined priority levels. Claims 1 and 7 presently define combinations including these features.

Gase does not disclose determination of priority levels for a plurality of print jobs waiting to be printed based on operation information detected from a terminal that transmitted the print job. Rather, *Gase* shows manually changing the order of the print job with a change button 60 based on a user's preference, and only when the client processor that delivered the print job is designed with a higher priority status than other client processors with print jobs on the job queue 28. In other words, a user can assign priority to the print job from their client processor, irrespective of the client processors operating state, only when their client processor is designated with high priority status. Therefore, *Gase* does not base priority on a

current operation state detected from a terminal that transmits a print job. For at least this reason, Claims 1 and 7 are allowable.

Also, Claims 5, 9, 22, 23, 25-28 and 30 depend from Claims 1, 7, 21, 26 and 29 and should therefore be allowable for at least the same reasons.

The Official Action rejects Claims 13-16 as being anticipated by *Akabori*.

Claim 13 generally defines a print controller having a combination of features including a memory that stores received print jobs in correspondence with information indicating a transmission origin terminal, a timer that measures elapsed time since reception of a most recent print job, a priority determining unit that determines a priority level for each terminal according to the measured elapsed time, and a controller that instructs the printer to process the plurality of print jobs in an order based on the determined priority levels.

Akabori discloses a data printing system and method where a controller controls the printing of jobs from an input unit by a printer. When the controller receives a plurality of jobs, it establishes a sequential order of transmission and generates a display signal indicating when (e.g., 5:30 PM) the respective jobs will be finished. The sequence of printing may be established on the basis of a priority associated with the jobs, on the amount of material currently available for printing, or on maximum capacity of printed paper. Specifically, as described in column 8, lines 47-56, when an end time is specified, a value is provided in the desired end time item 46 shown in Figure 3a. When the end time is not specified, a check is made as to whether the priority of the job is the top priority A.

Akabori does not disclose the feature generally directed to determining a priority level <u>according to a measured elapsed time</u> since reception of a most recent

current operation state detected from a terminal that transmits a print job. For at least this reason, Claims 1 and 7 are allowable.

Also, Claims 5, 9, 22, 23, 25-28 and 30 depend from Claims 1, 7, 21, 26 and 29 and should therefore be allowable for at least the same reasons.

The Official Action rejects Claims 13-16 as being anticipated by *Akabori*.

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Akabori does not disclose the feature generally directed to determining a priority level <u>according to a measured elapsed time</u> since reception of a most recent

print job. Rather, Figures 11a and 11b of *Akabori* show that the jobs are processed depending on their scheduled <u>end time</u>. In other words, a user can specify any desired end time (e.g., 5:30 PM) when they would like the print job completed, and priority is assigned based on the specified end time. The end time has no relation to measured elapsed time since the job was sent. Therefore, *Akabori* does not disclose a combination of features including determining a priority level according to the measured elapsed times since reception of a most recent print job as defined by Claim 13.

For at least these reasons, Claim 13 is allowable. Also, Claims 14 -16 depend from Claim 13 and should therefore be allowable for at least the same reasons.

Rejections under 35 U.S.C. § 103

The Official Action rejects Claims 6, 10 and 17-20 as being unpatentable over *Gase* in view of *Akabori*.

Claim 17 generally defines an image forming apparatus having a combination of features including a timer that measures, for each terminal, an elapsed time since a print job was last received, and a priority determining unit that determines a priority level for each terminal according to the measured elapsed times.

The Official Action relies on *Akabori* for teachings or suggestions of every feature defined by Claim 17, except that feature directed to an image forming unit that performs print processing corresponding to a received print job. *Gase* is relied upon for a disclosure of this feature. For at least the same reasons as set forth above with respect to Claim 13, *Akabori* does not teach or suggest a combination of

features including a timer that measures elapsed time since reception of a most recent print job. Therefore, Claim 17 is allowable.

Claims 18 and 20 depend from Claim 17. Therefore, Claims 18 and 20 should be allowable for at least the same reasons.

Claims 6 and 10 depend from Claims 1 and 7, respectively. As relied upon by the Official Action, *Akabori* does not remedy the above-noted deficiencies of the rejections of Claim 1 and 7. Therefore, by virtue of their dependence from Claims 1 and 7, Claims 6 and 10 are allowable.

The Official Action rejects Claims 2, 8 and 12 as being unpatentable over *Gase* in view of *Skinner.*

Claims 2 and 8 depend from Claims 1 and 7, respectively, and define that the detector detects, as the piece of operation information, a non-operational period during which the terminal has not been operated. The Official Action relies upon *Skinner* for a disclosure of these features. As relied upon, *Skinner* does not remedy the deficiencies of *Gase* with respect to Claims 1 and 7. Therefore, Claims 2 and 8 are allowable for at least the same reasons as Claims 1 and 7.

The Official Action proposes that Claim 12 defines the same subject matter as Claim 2, and accordingly relies on *Skinner* for a disclosure of such. For the same reasons as stated above with respect to Claim 2, *Skinner* does not satisfy the deficiencies of *Gase's* disclosure. Therefore, Claim 12 is allowable.

The Official Action rejects Claim 24 as being unpatentable over *Akabori* in view *Skinner.*

Claim 24 depends from Claim 21 and defines that the piece of processing priority information is generated according to an amount of time when an operator

has not operated a terminal. The Official Action relies on *Skinner* for a disclosure of this subject matter, however, *Skinner* does not remedy the deficiencies of the rejection of Claim 21. Therefore, because Claim 24 depends from Claim 21, it is allowable for at least the same reasons.

The Official Action rejects Claims 3 and 4 as being unpatentable over *Gase* in view of *Skinner* and further in view of *Akabori*.

Claims 3 and 4 depend from Claim 1. The Official Action relies on *Akabori* for a disclosure of the features defined by Claims 3 and 4, however, neither *Skinner* nor *Akabori* satisfy the deficiencies of the rejection of Claim 1. Therefore, Claims 3 and 4 are allowable for at least the same reasons as set forth with respect to Claim 1.

The Official Action rejects Claim 11 as being unpatentable over *Gase* in view of *Skinner* and further in view of *Suzuki*.

Claim 11 defines a terminal that transmits print jobs to a printer controller having a combination of features including, a receiving unit that receives a print job input by an operator, a timer that measures an elapsed time since an input device was operated, and a transmission controller that transmits the input print job after waiting for the timer to measure a specified time since an input device was operated.

Gase discloses a client processor 10, 12 that delivers a URL to a printer 14. Once the printer 14 receives the URL, the printer 14 uses the browser procedure 26 to respond to the received URL by accessing, via the WWW, the print job present in the application 22 that is designated by the URL. When the print job is accessed, the client processor then responds with the text of the print job, which is delivered to and printed by the printer 14.

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Skinner discloses a time and work tracker for automatically collecting information about the time and work performed on a computer. The purpose of *Skinner* is to monitor telecommuting employees time worked. The Official Action relies on *Skinner* for a disclosure of the above noted feature directed to a timer measuring an elapsed time since an input device was operated. However, there would have been no motivation to modify *Gase* to include a timer for measuring elapsed time since an input device was operated, at least because *Skinner* is not related to print jobs and only measures the elapsed time of inactivity for the purpose of evaluating how much an employee telecommuting actually works. Therefore, it would not have been obvious to a skilled person to employ measurement of inactivity to control the priority assigned to print jobs in *Gase*. Also, neither *Gase* nor *Skinner* teach or suggest making this modification, that this modification would be advantageous, or that this modification would be successful. Therefore, should this rejection be maintained, it is requested that it be explained how a skilled person would have been directed to modify *Gase's* network printing in view of *Skinner's* time and work tracker, or that this rejection be withdrawn.

Suzuki discloses a job scheduling system for print processing. A job processing system 10 is made up of a terminal 11, a job scheduling device 12, and a job execution section 13. The job scheduling device 12 is made up of a request control section 14, a job scheduling section 15, a job execution section control section 16, and a queue management section 17. The Official Action relies on the item 20 in figure 1 to disclose a transmission controller that transmits the input print job after waiting for a timer to measure a specified time since the input device is operated. This characterization is not accurate. In column 17, lines 17-21, it is

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stated that "[w]hen a job waiting for a password input from the user has timed out, the job is transferred from the printer queue 22 to the queue 20. When a password is input by the user, the job returns to the printer queue 22." In other words, the queue 20 transmits the input print job to the queue 20 after waiting for a password, not after waiting for a timer to measure a specified time since the input device was operated. Therefore, as relied upon by the Official Action, *Suzuki* does not teach or suggest a transmission controller that transmits the input print job to the printer after waiting for a timer to measure a specified time.

Conclusion

For at least the reasons stated above, it is requested that all the rejections be withdrawn and that this application be allowed.

Should any questions arise in connection with this application, or should the examiner feel that a teleconference would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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